

# *Project Baseline Summary Report*

Data Source: **EM CDB**  
Operations/Field Office: **Nevada**  
Site Summary Level: **Nevada Test Site**  
Project **NV400 / Program Integration**

Report Number: **GEN-01b**  
Print Date: **3/9/2000**  
HQ ID: **0064**

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## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

Program Integration provides contractual, financial, professional, administrative, and cross-cutting support of Environmental Management activities at the Nevada Test Site (NTS), Tonopah Test Range, and eight off-site locations in Alaska, Colorado, Mississippi, Nevada, and New Mexico. Overall management of the DOE/NV Environmental Management projects and their component projects is most efficiently accomplished by integrating the functions that are common to all project activities. To achieve greater efficiency, economy of scale, and cross-function consistency when dealing with similar or like functions among all activities. The program integration function is divided into five areas: Administrative Services, Project Planning and Control, Technical and Regulatory Support, Quality Assurance and Health and Safety.

Administrative Support provides direct support of the A/E contact and includes vehicles, including gasoline, maintenance, and communication equipment; telephone services, including equipment, maintenance, and modifications; miscellaneous logistics support; medical facility support; communications equipment including portable radios, remote radios, and pagers; document editing and production; and administrative, accounting, and human resources functions.

Project Planning and Control provides for updating and maintenance of the Waste Management and Environmental Restoration Baselines, strategic initiatives, AMEM program planning processes, development of applicable plans, project tracking and control, performance measurement and reporting, development and maintenance of programmatic Work Breakdown Structures, Environmental Policy Support, and ad hoc data calls.

Technical and Regulatory Support provides support to comply with all applicable federal, state, and local laws, regulations, requirements, and orders in the management and operation of AMEM facilities. Activities also include: compliance activities such as Performance Assurance, Contingency Plans, DOE Order Implementation, risk assessment, Public Participation, Emergency Response and regulatory Training, and Data Management.

Quality Assurance (QA) provides management and support for the implementation of Quality Management Plans, support of internal assessments and audits, quality assurance training; and collection, review, and dissemination of internal and external lessons learned.

Health and Safety provides integrated management services for health, safety, industrial hygiene, radiological control, and accident records control and reporting; and review, revision, update, and maintenance of health and safety plans.

#### **Project Status in FY 2006:**

Programmatic support activities will be decreasing because individual project activities will be nearing completion. Fixed-cost items for DOE/HQ initiatives, such as the Paths to Closure, QA, H&S, technical and regulatory support, and the Low-Level Waste (LLW) Project, will continue through the life of the Nevada Environmental Management Program.

#### **Post-2006 Project Scope:**

Scope after FY 2006 will include fixed-cost items for DOE/HQ initiatives and the programmatic support required until the Soils, Underground Test

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Area (UGTA), Industrial Sites, and Off-Sites remediation activities and the Mixed Low-Level (MLLW) and Low-Level (LLW) Waste are completed.

### **Project End State**

Fixed costs associated with regulatory and DOE/HQ reporting requirements will continue until all projects are completed. For this report, it continues through FY 2070.

### **Cost Baseline Comments:**

The Nevada Environmental Restoration and Waste Management baseline costs are based on bottoms-up, activity based work packages. Cost data in these work packages was derived from historical facility and operations data, bottoms-up estimates, commercially available databases, professional judgement, and bids from existing vendors.

### **Safety & Health Hazards:**

Hazards associated with this PBS are primarily associated with long-term surveillance and monitoring activities.

The hazards that may be encountered during oversight activities are those associated with the activities at specific sites. These hazards may include the following; industrial and construction hazards common to the environmental assessment and remediation industry and radiological contamination. Activities performed may include, soil and liquid sampling, and the transport of potentially contaminated liquids, soils and other materials from sites. Workers can be expected to encounter the normal occupational/physical hazards associated with field work involving use of electrical generators and field wiring; lifting, slip, trip and fall; confined spaces; and excavations. In addition, the hazards of working in a desert environment include biological hazards and physical agents such as venomous reptiles and insects, rodents potentially infected with the Hantavirus, wild animals, heat stress and heat related injury, cold stress, and adverse weather conditions including high winds and flash floods. Radiological hazards are those associated with the on-site contaminants and may include tritium, depleted uranium, plutonium, and other radionuclides. Chemical hazards include those associated with both the on-site contaminants and the use of operational chemicals such as gasoline, diesel, and sampling preservatives. Due to their locations, some sites may also contain hazards from unexploded ordnance. All activities are conducted to ensure compliance with guidance and direction provided by DOE and applicable OSHA requirements for hazardous waste operations. This includes the information and procedures provided in the overall Nevada Environmental Management Program Health and Safety Plan (HASP) and in the site-specific health and safety plans (SSHASPs) which are unique to each field project or operation. The SSHASP is prepared, reviewed and approved by cognizant personnel prior to the commencement of hazardous waste operations and field activities. The SSHASPs contain an integrated safety management approach to the assessment of the field-work and operations hazards and the appropriate control and mitigation procedures. Such information includes a health and safety (H&S) risk or hazard analysis for each site task and operation, identification of key project management and H&S personnel, site exposure monitoring requirements, personal protective equipment and procedures, medical surveillance requirements, and emergency response guidance. Specialized guidance on specific hazards such as confined spaces, drill-rig safety, excavations, lead, asbestos and other toxic/carcinogenic materials are provided when appropriate. The procedures and guidance outlined above are applicable throughout the life cycle of the project.

### **Safety & Health Work Performance:**

The resources necessary to accomplish the work safely are provided through the PBS, the site Health and Safety (H&S) Program requirements, and through the resources allocated to the site's integrated safety management system in the following areas: radiological safety, emergency management,

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## **Project Description Narratives**

fire safety, industrial hygiene and safety, occupational medicine, security, performance oversight, and standards management. To ensure readiness prior to the start of work, Operation Readiness Reviews, hazard assessment reviews, and radiological ALARA reviews are conducted as required. The measures used to monitor the adequacy of health and safety controls include several integrated approaches. Internal and external program management reviews and audits are conducted to assess overall effectiveness and compliance. Ongoing on-site surveillance is conducted by both project management and H&S professionals to confirm work-site controls and procedures are being followed. Occupational exposure monitoring is conducted at the work sites to verify the effectiveness of contamination controls. If unforeseen H&S hazards arise that are not already covered by contingency planning, work activities are suspended until the hazard is properly addressed by management and H&S specialists. Stop Work Orders are issued if there is an imminent hazard. Formalized change control procedures are used to manage and to document major project changes.

H&S professionals ensure that work is planned in accordance with 29 CFR 1910, 29 CFR 1926, 40 CFR, 49 CFR, and 10 CFR requirements. Resources and personnel that may be necessary include industrial hygienists, health physicists, safety professionals, waste management specialists, quality assurance programs, on-site exposure monitoring (both technicians and instruments), internal and external dosimetry programs, medical surveillance and medical emergency care programs, personal protective equipment, and engineering controls.

### **PBS Comments:**

#### **Baseline Validation Narrative:**

The Nevada Environmental Restoration and Waste Management Project Baselines, which comprise the individual Project Summary Baselines for the DOE/NV Environmental Management program, have been formally reviewed by both the U.S. Army Corps of Engineers (USACE) and the DOE/HQ-sponsored Core Technical Group.

The team reviewed elements of scope, schedule, costs, assumptions, and an integrated execution strategy as well as management approaches and strategies. The team concluded that the creation of an Environmental Management cost-estimating system improved project and work task scheduling efforts, and further integrated planning, cost accounting, project controls, and management systems. The team further concluded the baseline document provides credible scoping information for DOE/NV Environmental Restoration and Waste Management activities even though the majority of restoration activities have not yet been characterized and are in a conceptual phase of development. Other conclusions were that the "template" approach used in the near real-time electronic baseline can be easily modified to reflect more accurate project data as it becomes available. It can also be used to quickly reflect the consequences of future funding scenarios. The document reflects a high degree of stakeholder and regulator input in terms of project prioritization and presents a credible approach to project completion in accordance with 2006 Plan goals. However, the scope in the baseline is subject to numerous fiscal, regulatory, and land-use uncertainties which could impact the project completion date. Finally, the Core Technical Group concluded that these future uncertainties are well beyond the influence of the parties responsible for project execution.

During their reviews in 1997 and 1998, The Army Corps of Engineers and DOE/HQ Core Technical Working Group recommended enhancements to the WM Baseline (such as identifying and including estimates for programmatic risk, reconciling basis of estimates annually, ensuring planning methodology supports the mission and strategic vision,

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## Project Description Narratives

and utilizing a systems engineering approach) have been addressed in the current baseline update.

The Nevada Environmental Restoration Project has completed mitigation of findings and recommended corrective actions from the USACE and Core Technical Group reviews. The informal review of the baseline by the IG resulted in no findings.

## General PBS Information

**Project Validated?** Yes **Date Validated:** 7/1/1997  
**Has Headquarters reviewed and approved project?** No  
**Date Project was Added:**  
**Baseline Submission Date:** 7/8/1999  
**FEDPLAN Project?** Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	N	N	N	N	Y	Y	N

## Project Identification Information

**DOE Project Manager:** Bobbie McClure  
**DOE Project Manager Phone Number:** 702-295-1862  
**DOE Project Manager Fax Number:** 702-295-1113  
**DOE Project Manager e-mail address:** mcclure@nv.doe.gov  
**Is this a High Visibility Project (Y/N):**

## Planning Section

### Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	111,329	414,566	525,895	9,916	9,916	11,437	11,438	12,402	10,565	10,870	10,425	10,736	11,060	11,199	12,719

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## Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (constant 1999 dollars)	104,640	180,586	285,226	9,916	9,916	11,437	11,438	12,402	10,287	10,367	9,738	9,822	9,910	9,828	10,933	
PBS EM Baseline (current year dollars)	111,329	414,566	525,895	9,916	9,916	11,437	11,438	12,402	10,565	10,870	10,425	10,736	11,060	11,199	12,719	
PBS EM Baseline (constant 1999 dollars)	104,640	180,586	285,226	9,916	9,916	11,437	11,438	12,402	10,287	10,367	9,738	9,822	9,910	9,828	10,933	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	8,270	8,256	7,427	7,632	24,156	19,420	21,433	23,401	25,802	28,226	31,183	34,165	37,802	41,474	45,952	49,967
PBS Baseline (constant 1999 dollars)	6,962	6,808	5,998	6,037	17,960	13,014	12,946	12,739	12,660	12,482	12,430	12,274	12,240	12,103	12,087	11,846
PBS EM Baseline (current year dollars)	8,270	8,256	7,427	7,632	24,156	19,420	21,433	23,401	25,802	28,226	31,183	34,165	37,802	41,474	45,952	49,967
PBS EM Baseline (constant 1999 dollars)	6,962	6,808	5,998	6,037	17,960	13,014	12,946	12,739	12,660	12,482	12,430	12,274	12,240	12,103	12,087	11,846

## Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

## Project Reconciliation

### Project Completion Date Changes:

Previously Projected End Date of Project:

Current Projected End Date of Project: 9/30/2070

Explanation of Project Completion Date Difference (if applicable):

### Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	Actual 1997 Cost:	9,916	Actual 1998 Cost:	11,438
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	-21,354	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):	-577	
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	-21,931			

### Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	-21,931	
Additional Amount to Reconcile (+):	285,804	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	263,873	

## Milestones

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Complete Area 11EOD O&M Plan	BN-004		9/30/1999		9/30/1999						
Complete Annual Update #1 of the FFACO Appendices	IT-001		2/15/1999		2/15/1999						
Complete Annual Update #2 of the FFACO Appendices	IT-004		8/16/1999		8/16/1999						
Complete Update of Baseline	IT-002		3/15/1999		3/15/1999						
Complete Update of PBS	IT-003		4/15/1999		4/15/1999						
Complete Draft Revised RCRA Permit Application	BN-002		7/1/1999		7/1/1999						
Complete HWSU O&M Plan	BN-003		9/30/1999		9/30/1999						
Complete Update WM Baseline	BN-001		4/30/1999		1/30/1999						
Project Start			6/30/1997								
Project End			9/30/2070								
Submit Asbestiform LLW Disposal Annual Report to State			3/1/1999								
Submit Asbestos Application to State			3/16/1999								Y
Update draft of RCRA Part B Permit Renewal			7/31/1999								
Update draft of RCRA Part B Permit Renewal			7/31/2009								
Submit Final RCRA Part B Permit Renewal to State			11/15/2009							Y	

## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Area 11EOD O&M Plan	BN-004										Complete Area 11EOD O&M Plan.
Complete Annual Update #1 of the FFACO Appendices	IT-001										Complete semi-annual update of FFACO appendices.
Complete Annual Update #2 of the FFACO Appendices	IT-004										Complete semi-annual update of FFACO appendices.
Complete Update of Baseline	IT-002										Update the Environmental

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## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Update of PBS	IT-003										Restoration Baseline.
Complete Draft Revised RCRA Permit Application	BN-002										Update PBSs.
Complete HWSU O&M Plan	BN-003										Draft revised RCRA permit application.
Complete Update WM Baseline	BN-001										Complete HWSU O&M plan.
Project Start				Y							Update Waste Management baseline.
Project End					Y	Y					NV 201 Program Integration and NV 330 Program Management were consolidated into NV 400 Program Integration
Submit Asbestiform LLW Disposal Annual Report to State		Y									
Submit Asbestos Application to State		Y									
Update draft of RCRA Part B Permit Renewal											
Update draft of RCRA Part B Permit Renewal										Y	
Submit Final RCRA Part B Permit Renewal to State										Y	

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